

EISH



AC current monitoring relay



Benefits

- **Low minimum current.** To sense the activity of small loads.
- **No auxiliary power supply needed.**
- **Solid state output.** For easy connection to PLCs or controllers.
- **Small size.** To fit panels without having to redesign them.

Description

Small size current monitoring relay with built-in current transformer and integrated solid state output.

Self-powered from the input current with 2-wire connection for easy setup.

12 mm hole for insulated current wire to easily insert the metered cable (multiple times if needed).

For mounting on DIN-rail or back panel.

Applications

EISH is used in several building automation solutions as ON/OFF relay for water circulation pumps, extractor fans and lights.

It allows to provide prompt reaction in case of failure of the load, as pump replacement, backup or other corrective actions.

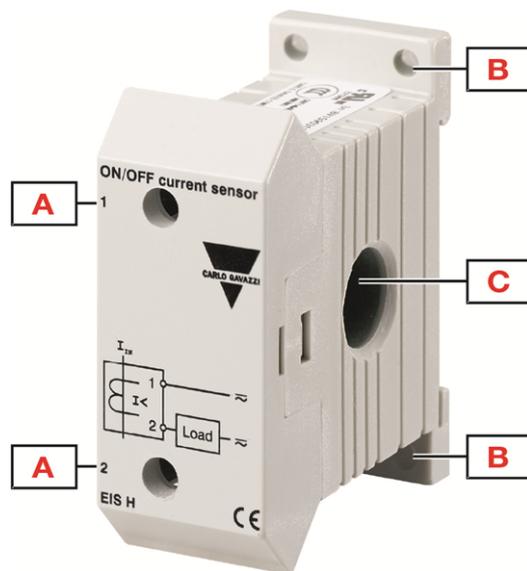
Main features

- Detection of AC current from 200 mA up to 60 A.
- No setpoint adjustment required.

Order code

Mounting	Output capabilities	Current setpoint	Component name/part number
DIN-rail / wall	24 V AC/DC	200 mA	EISH200MA024
	230 V AC/DC	400 mA	EISH400MA230

Structure



Element	Component	Function
A	Terminals	Solid state output
B	Wall fixing holes	Wall mounting
C	Hole	For current insulated wire

Features

Inputs

Measured variables	Current level
Current measuring	Direct through built-in current transformer
Minimum current	EISH200MA024: 200 mA EISH400MA230: 400 mA
Maximum current (continuous)	60 A
Maximum current for 3 s	360 A
Maximum current for 30 s	180 A
Frequency range	50 to 60 Hz \pm 10% sinusoidal waveform

Note: it is possible to measure currents below the nominal range by drawing the conductor through the hole several times. If the conductor is drawn through the central hole e.g. 5 times, the transformer will measure 5 A AC when the current in the conductor is 1 A AC.

Outputs

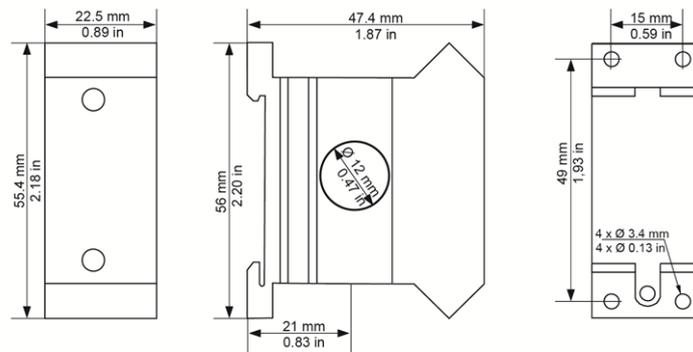
Terminals	1, 2		
Number of outputs	1		
Type	Solid state, NO		
Logic	When input current decreases below the minimum value the output opens, when the input current increases above the minimum value the output closes		
Contact rating		EISH 024	EISH 230
	Current	Max. 1 A	Max. 0.5 A
	Voltage range	0.5 to 30 V AC/DC	2 to 250 V AC/DC
	Leakage current	Max. 100 μ A	Max. 100 μ A
	Voltage drop	Max. 0.5 V @ 1 A	Max. 2 V @ 0.5 A
Assignment	Associated to undercurrent alarm		

Insulation

Terminals	Basic
Current cable to terminals	2.5 kV _{rms} , 4 kV impulse 1.2/50 μ s (required basic insulation of the cable)
Overvoltage category	III (IEC 60664)

General

Material	Polycarbonate (PC) or Polycarbonate/ABS Alloy (PC+ABS)
	Flammability rating: HB according to UL 94
Colour	RAL7035 (light grey)
Dimensions (W x H x D)	22.5 x 55.4 x 47.4 mm (0.89 x 2.18 x 1.87 in)
Weight	Approx. 70 g (2.47 oz)
Terminals	Cable size from 0.82 to 1.30 mm ² (AWG18 to AWG16), stranded or solid
Tightening torque	Max. 0.5 Nm (4.425 lbin)
Terminal type	Screw terminals



Environmental

Operating temperature	-20 to 50 °C (-4 to 122 °F)
Storage temperature	-30 to 70 °C (-22 to 158 °F)
Relative humidity	5 - 95% non condensing
Protection degree	IP20
Pollution degree	2
Operating max altitude	2000 m amsl (6560 ft)
Salinity	Non saline environment
UV resistance	No

Compatibility and conformity

Marking	  
Directives	2014/35/EU (LVD - Low voltage) 2014/30/EU (EMC - Electromagnetic compatibility) 2011/65/EU, 2015/863/EU (RoHS)
Standards	EN 60947-5-1 Immunity: EN 61000-6-2 Emission: EN 61000-6-3 EN 63000
Approvals	   

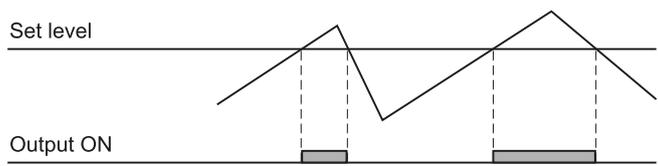
Operating description

Alarms

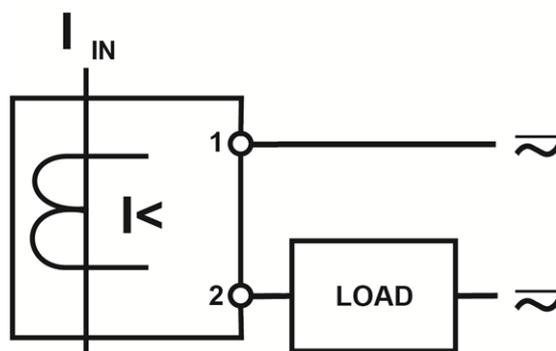
EISH alarm trips when the current drops below 200 mA (for EISH200MA024) or below 400 mA (for EISH400MA230).

Current level alarm	
Input variables	Up to 60 A AC
Reaction time	EISH200MA024: <250 ms from 200 to 0 mA EISH400MA230: <250 ms from 400 to 0 mA
Logic	EISH200MA024: closed state \geq 200 mA; open state \leq 40 mA EISH400MA230: closed state \geq 400 mA; open state \leq 80 mA <i>NOTE: between "closed state" and "open state" the output status is not defined.</i>

Operating diagram



Connection diagram



References

Further reading

Information	Where to find it	QR code
Installation manual	https://www.gavazziautomation.com/images/PIM/MANUALS/ENG/EISH_IM.pdf	
PSS selection tool	https://carlogavazzi-pss.com/	



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